

Tuesday, January 26, 2016 3:19:29 PM

141043

Page 1

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 1/26/2016 **Start Qty:** 12.00 ²⁹ ***12***

Cust Item ID:

Required Date: 1/26/2016 **Req'd Qty:** 12.00 ***12***

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: MLJ Date: JAN 29 2016 Tooling: _____ Date: _____

Stop ***NR2***

OC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Draw Nbr	Revision Nbr
D2858	Rev C

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blanks 5,850

" Note: 1 Blank Makes 3 Parts

DAS
44
9-89

16/02/16

110

0,00

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.05

HAAS CNC vertical machine #1

1-Machine per folio FA941

FOLIO REV: 44

DWG REV: 5

2-Deburr any rough edges

120

0.00

120

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Work Order ID 141043

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141043

Page 2

Item ID: D2858-2 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Hinge Bracket
Start Date: 1/26/2016 Start Qty: 12.00 *12* Cust Item ID:
Required Date: 1/26/2016 Req'd Qty: 12.00 *12* Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				24	0		DAS 14 9-88 16/02/18
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.01				224	0	16/02/27	
150 *150* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum m 108962 Memo START TIME: 1:35 FINISH TIME: 2:05	0.00 0.00				24	0	16-02-22	DAS 34 9-88

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 141043

141043

Page 3

Tuesday, January 26, 2016 3:19:29 PM

Item ID: D2858-2 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Hinge Bracket
 Start Date: 1/26/2016 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 1/26/2016 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
160									
QC	Memo	0.00							DAS 38 9-89
Quality Control									FEB 23 2016
170	Identify as per dwg & Stock Location: <u>5012</u>	0.00							
170									
Packaging	Memo	0.00							DAS 6 9-89
Packaging									FEB 23 2016
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.02							
Quality Control									16/2/24 J

MCS FEB 24 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			
Description Work Order Deviation				Disposition						
Root Cause		FAULT CATEGORY								
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process								
Misidentified ☐	☐	Past Due	OTHER :							

Picklist Print

Tuesday, January 26, 2016 3:19:28 PM

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Work Order ID: 141043

141043

Parent Item: D2858-2

D2858-2

Parent Item Name: Hinge Bracket

Start Date: 1/26/2016

Required Date: 1/26/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP C00.06.22Removed P/O for powder coatEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B1.500X01.25 0		Purchased		No		110	f	14.3470	0.163	2.058947			
M6061T6B1 500X01 250										**	DAS 44 9-09	16/02/16	
6061-T6 Bar 1.50 x 1.25													

Location

Loc Qty

Loc Code

MAT

8.85

✕ m133038

8.85

MAT003

5.497

m129167

5.497

3.925

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : ☐			
Misidentified ☐		Past Due ☐					

DART AEROSPACE LTD		Work Order: 141043
Description: Hinge Bracket		Part Number: D2858-2
Inspection Dwg: D2858	Rev: C	Page 1 of 1

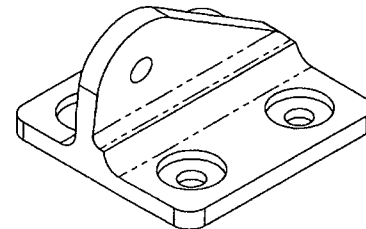
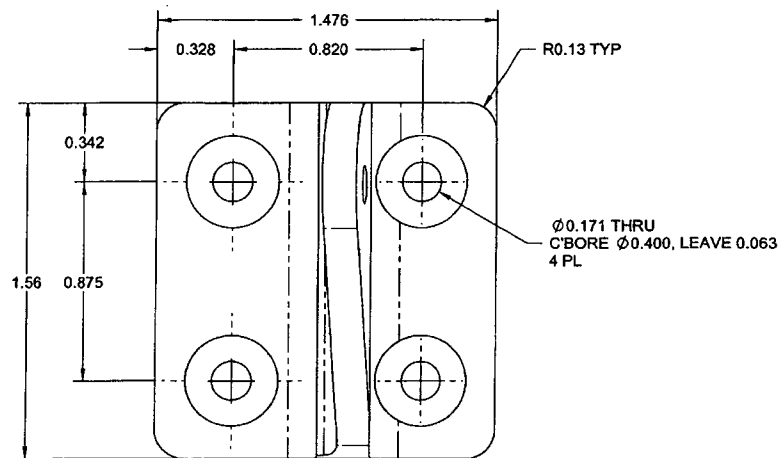
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.171	+0.005/-0.000	172	✓		VERN	SL-10
Ø0.400	+0.005/-0.000	402	✓		-	
R0.125	+/-0.010	125	✓		-	
0.328	+/-0.010	328	✓		-	
0.820	+/-0.005	820	✓		-	
1.476	+/-0.010	1.476	✓		-	
0.342	+/-0.010	343	✓		-	
0.875	+/-0.010	875	✓		-	
1.56	+/-0.030	1.562	✓		-	
0.147	+/-0.010	147	✓		-	
0.717	+/-0.010	719	✓		H.G	
0.697	+/-0.010	695	✓		H.G	
0.229	+/-0.010	229	✓		VERN	
R0.125	+/-0.010	125	✓			
R0.063	+/-0.010	063	✓			
0.063	+/-0.010	063	✓		mic	SL-4
0.126	+/-0.010	126	✓		VERN	
0.630	+/-0.010	632	✓		H.G	
Ø0.354	+/-0.010	354	✓		VERN	
0.965	+/-0.010	965	✓		-	
Ø0.166	+0.005/-0.000	166	✓		-	

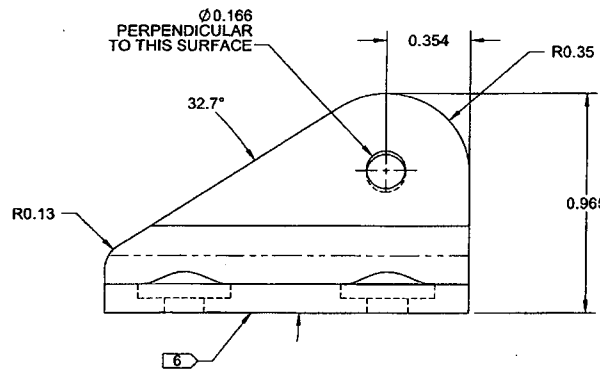
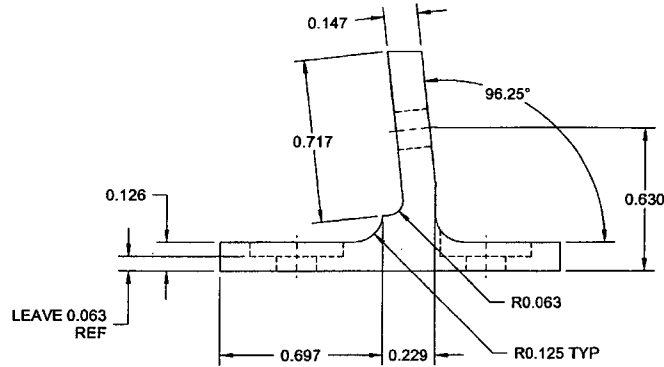
Measured by: Sh	Audited by: DAS 14 0.89	Preliminary Approval:
Date: 11-2-18	Date: 16/02/18	Date:

Rev	Date	Change	Revised by	Approved
A	04.11.11	New Issue	KJ/JLM	
B	11.11.07	Dwg Rev updated	KJ	

8 7 6 5 4 3 2 1



141043 MJS
16-01-29



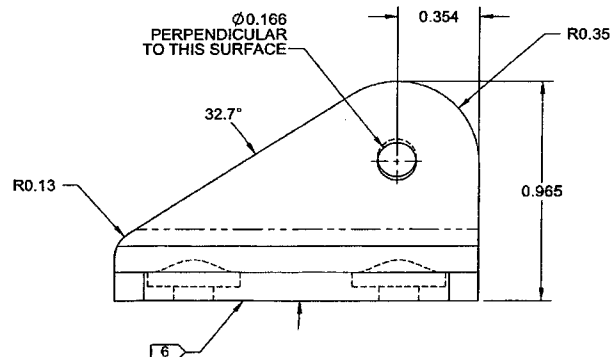
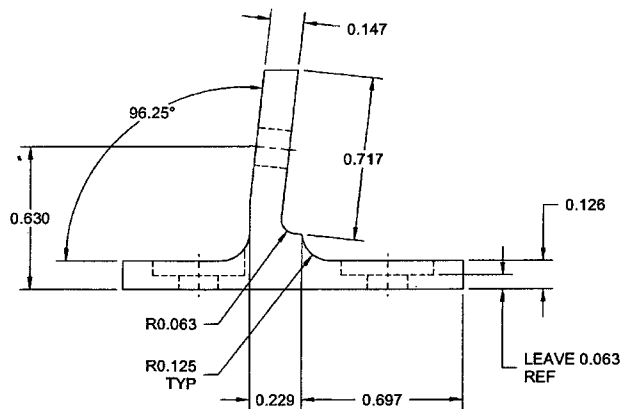
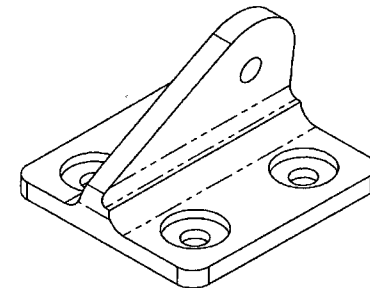
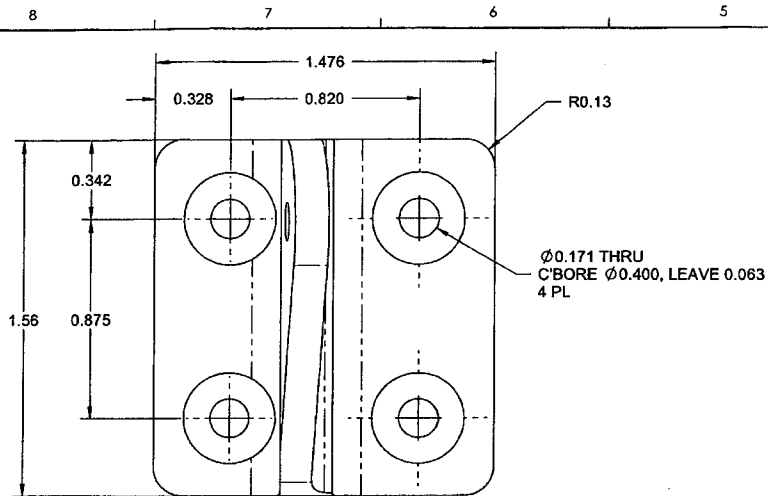
RELEASED
2010-11-26

D2858-1 HINGE BRACKET

- NOTES:
- 1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-225/8 OR QQ-A-200/8 OR ASTM B211 OR ASTM B221 REF DART SPEC M6061T6B
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: DART P/N "D2858-1" PER DART QSI 044 6.1
 - 7) WEIGHT: 0.04 lbs

C	REDRAW TO CURRENT STD, REMOVE ENGRAVED P/N, IDENT. NOW W/ MARKER (A8-1, A8-2), REF PAR 10-040	CP	10.10.12
B	0.717 WAS 0.667, 1.56 WAS 1.559	KE	99.02.28
A	NEW ISSUE	KE	98.12.14
REV.	DESCRIPTION	BY	DATE
DESIGN	KE		
DRAWN	JP		
CHECKED	JP		
MFG. APPR.	JP		
APPROVED	JP		
DE APPR.	JP		
DATE	10.10.12		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. D2858			
TITLE HINGE BRACKET			
SHEET 1 OF 2			
SCALE NTS			
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8 7 6 5 4 3 2 1



D2858-2 HINGE BRACKET

NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-225/8 OR QQ-A-200/8 OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: DART P/N "D2858-2" PER DART QSI 044 6.1
- 7) WEIGHT: 0.04 lbs



DESIGN	KE	DART AEROSPACE LTD	
DRAWN	JP	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D2858	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		HINGE BRACKET	NTS
DATE	10.10.12	COPYRIGHT © 1998 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR ORIGINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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2010-11-26